

PATENT SPECIFICATION

327,802

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PROVISIONAL SPECIFICATION.

Improvements in and relating to Display Stands.



We, TOWNSHENDS LIMITED, British Company, of Ernest Street, Holloway Head, Birmingham, and WILLIAM TOWNSHEND, British Subject, of the same address, do hereby declare the nature of this invention to be as follows:—

This invention relates to display stands which are adjustable in height, and in which the table, or support part, is also adjustable in relation to the stand or pillar.

Such stands commonly comprise a base portion, a tubular pillar, a rod telescoping into the pillar, and a table or support adjustably mounted on the top of the rod.

It is an object of the present invention to arrange for a locking device which retains the rod in various stages of its telescopic movement into the pillar to be readily releasable by the same hand as is used to raise or lower the rod.

In accordance with the invention, the rod is formed of channel section, or is provided with a longitudinal groove along it.

Inside the trough of the channel, or inside the groove, we arrange a resilient pivoted rack with ratchet-like teeth having their abrupt faces downwardly directed. The rack is pivoted at or near the bottom of the rod by such means as a pin passing through the sides of the channel and through the rack, and a blade spring, or other suitable spring, is arranged behind the rack within the channel or groove. The rack is thus urged away from the back of the trough to cause its teeth to project from the rod. The amount of projection is limited by leaving a small tail of the rack below the pivot so that when the upper end has

moved out a certain distance, this tail comes into contact with the back of the trough or groove. A knob or button is secured in the upper end of the rack so that it can readily be closed into the groove against its spring by the thumb or a finger of the hand which holds the rod for raising or lowering the rod in the pillar.

In the upper end of the pillar, we provide a slight internal projection or tooth to engage with the rack teeth. This may be formed by a pin or stud passed through the wall of the pillar, or through a cap at the top of the wall.

This forms a very convenient adjustable arrangement for a display stand, is simple and cheap to produce, and gives a wide range of comparatively fine adjustments.

A convenient form of joint between the upper part of the rod and the table, or support, may be made by arranging a jaw-like cap on the rod with a bore in it communicating with the bottom of the jaw, and anchoring a worm in the jaw to engage the toothed edge of a part-circular plate which projects from the back of the table or support and is pivoted in the jaw.

The worm spindle can be provided with a knob or other convenient manipulating arrangement, and as the worm is rotated the part-circular plate and thus the table or support, is rocked about its pivot in the jaw on the rod.

Dated this 7th day of February, 1929.

For the Applicants,
BARKER, BRETTELL & DUNCAN.
Chartered Patent Agents,
75 and 77, Colmore Row, Birmingham.

COMPLETE SPECIFICATION.

Improvements in and relating to Display Stands.

We, TOWNSHENDS LIMITED, British Company, of Ernest Street, Holloway Head, Birmingham, and WILLIAM TOWNSHEND, British Subject, of the same address, do hereby declare the nature of this invention and in what manner the

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same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to display stands which are adjustable in height, and in which the table, or support part, is also

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adjustable in relation to the stand or pillar.

Such stands commonly comprise a base portion, a tubular pillar, a rod telescoping into the pillar, and a table or support adjustably mounted on the top of the rod.

It is an object of the present invention to arrange for a locking device which retains the rod in various stages of its telescopic movement into the pillar to be readily releasable by the same hand as is used to raise or lower the rod.

The present invention comprises the combination with a channel shaped or grooved rod of a rack pivoted at its lower end and urged outwardly at its upper end by a spring behind it. In the upper end of the pillar or tubular part into which the channelled or grooved rod telescopes a tooth or projection is provided to engage the teeth of the rack. The tooth or projection may be provided by a screw pin passed through the top of the pillar or tubular part.

The appended drawings illustrate the improved display stand.

Figure 1 is a side elevation with the telescopic upper part slightly drawn out of the pillar.

Figure 2, is a back view of the telescopic upper part without the tube and base of the pillar.

Figure 3, is a sectional side view with the upper part drawn out to its full extent. *a* is the base, *b* the tubular pillar in which the upper part *c* telescopes, *d* represents a tray or supporting surface of any suitable kind, and *e*, *f*, is an adjusting gear (in this example a worm *e* and worm wheel *f*) for varying the angle of the tray or supporting part on the telescopic portion *c*. Features equivalent to these are common features in these display stands.

The telescopic upper part *c* is made as a channel-shaped cross-section or as a grooved rod, and inside the channel or the groove of the rod we arrange a pivoted rack *g* with ratchet-like teeth having their abrupt faces downwardly directed. The rack *g* is pivoted at, or near, the bottom of the rod *c* by such means as a pin *h* passing through the sides of the channel and through the rack, and a blade spring *i*, or other suitable spring, is arranged behind the rack to bear within the channel or groove. The rack *g* is thus urged away from the back of the trough to cause its teeth to project from the rod, see Figure 3. The amount of projection is preferably limited by leaving a small tail of the rack below the pivot *h* so that when the upper end has moved out a certain distance, this tail comes into contact with the back of the trough or groove. A knob or button *j* is secured in the upper end of

the rack so that the latter can readily be closed into the groove against its spring *i* by the thumb or a finger of a hand which holds the rod for raising or lowering the rod in the pillar *b*.

In the upper end of the pillar, we provide a slight internal projection or tooth to engage with the rack teeth. This may be formed by a grub screw *k* or by a pin or stud passed through the wall of the pillar, or through a terminal cap *m* which is screwed or otherwise secured to the top of the wall of the pillar.

The pivot pin *h* abuts against the bottom of the terminal *m* on the pillar *b* when the upper part *c* is fully extended, thus forming a stop to prevent complete removal.

This forms a very convenient adjustable arrangement for a display stand; is simple and cheap to produce, and gives a wide range of comparatively fine adjustments.

A convenient known form of joint between the upper part of the rod and the table, or support, may be made by arranging on the rod *c* a cap or terminal *n* terminating in a fork. A bore in the cap communicates with the bottom of the fork; and a worm *e* in the bore engages the toothed edge of a part-circular plate *f* which projects from the back of the table or support *d* and is pivoted in the fork *n*. The worm spindle can be provided with a knob or other convenient manipulating arrangement, and as the worm is rotated the part-circular plate, and thus the table or support, is rocked about its pivot in the fork on the rod.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. An improved display stand comprising in combination a channel shaped or grooved rod telescoping into a pillar, a toothed rack arranged within the channel or groove and pivoted near the lower end thereof, and a spring for urging the upper free end of the rack outwardly so that its teeth may engage a projection on the pillar.

2. An improved display stand of the telescopic kind as in Claim 1, wherein the pivoted rack has a blade spring secured behind its upper end in order to bear against the back of the channel and cause the rack to project.

3. An improved display stand as in Claim 1, wherein a projection is provided at the upper end of the pillar to engage the teeth of the rack and a stop is arranged for engaging the pivot pin of the rack to prevent complete withdrawal of the rod.

4. The improved display stand substantially as described with reference to the appended drawings.

Dated this 21st day of August, 1929.

For the Applicants,
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FIG. 1

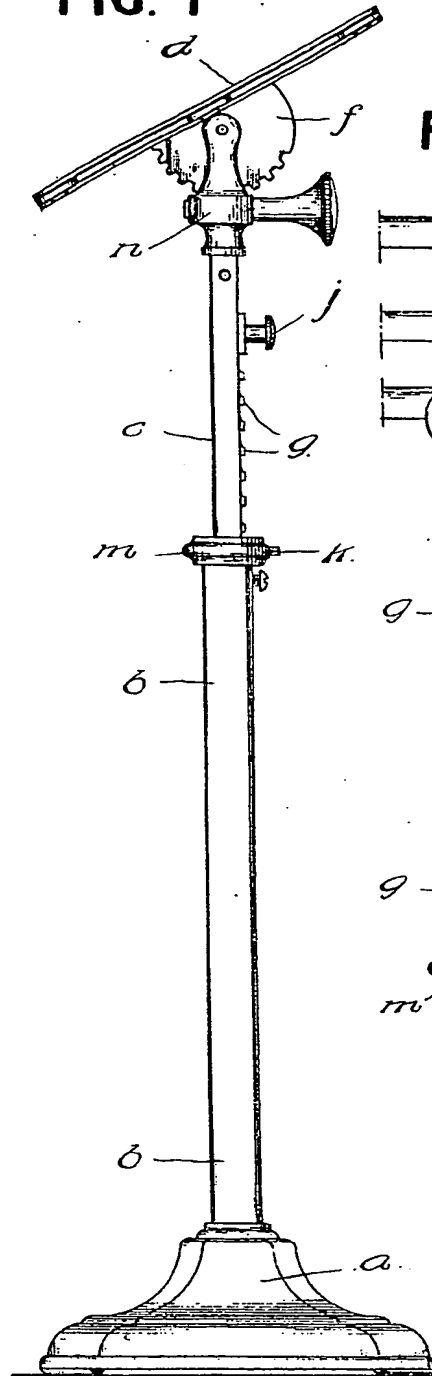


FIG. 2

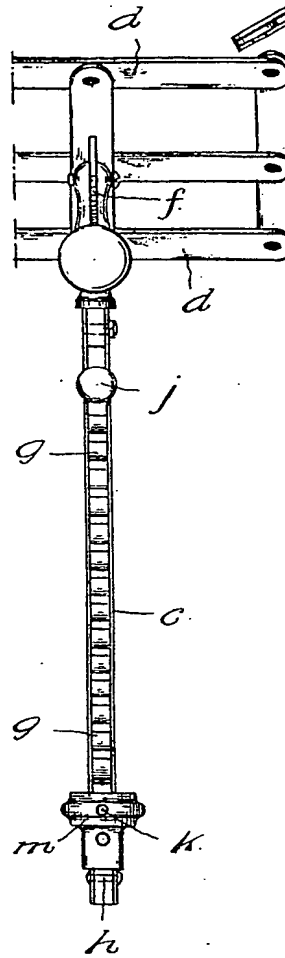
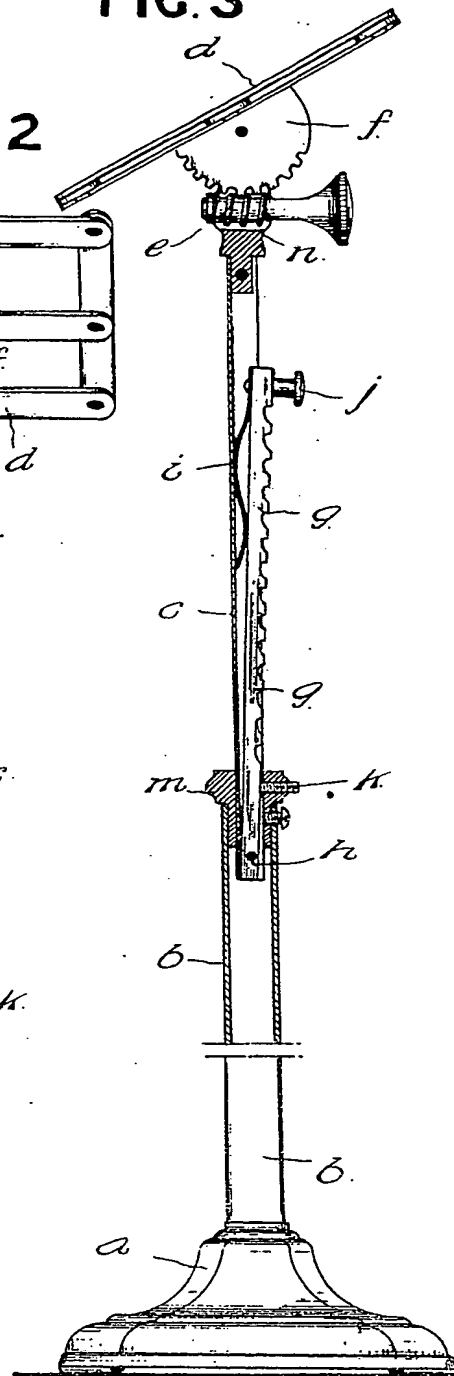


FIG. 3



[This Drawing is a reproduction of the Original on a reduced scale.]